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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/059,765	01/28/2002	Glen J. Desargant	7784-000332	5014
7590	10/24/2003		EXAMINER LE, HOANGANH T	
Mark D. Elchuk P.O. Box 828 Troy, MI 48303			ART UNIT 2821	PAPER NUMBER 5

DATE MAILED: 10/24/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
10/059,765

Applicant(s)
DESARGANT et al

Examiner
HOANGANH LE

Art Unit
2821



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Jul 3, 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-45 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-22 and 41-45 is/are allowed.
- 6) ☒ Claim(s) 23, 27, 28, 30-34, 36-38, and 40 is/are rejected.
- 7) ☒ Claim(s) 24-26, 29, 35, and 39 is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 6) ☐ Other:

DETAILED ACTION

1. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.
2. The preliminary amendment filed on July 3, 2003 is acknowledged.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

4. Claims 23,27,28,30-34,36-38 and 40 are rejected under 35 U.S.C. 102(e) as being anticipated by Krantz (the US Patent No. 6,307,509).

The Krantz reference teaches in figures 1-6 an antenna comprising: a first antenna component 24; a second antenna component 14; and a support element 20 operable to mount the second antenna component 14 to the first antenna component 24 such that the second antenna component is in facing relationship to the first antenna component, the

support element 20 having at least one aperture 18; wherein the aperture 18 reduces a dielectric constant of the support element to enhance antenna performance (col.4, lines 18-41). The first antenna component and the second antenna component comprise: a patch antenna, the patch antenna operable to relay signals to an input connector through an inherent coaxial feed cable. The aperture 18 comprises a plurality of apertures arranged in a plurality of columns circumferentially extending about the support element (figure 2). The aperture 18 comprises at least one circular aperture (figure 2). The aperture 18 comprises at least one longitudinal slot (figure 8). The aperture comprises at least one elongated slot (figure 8). The aperture comprises a plurality of apertures forming a plurality of differing shapes (col. 4, lines 49-61). The aperture comprises a plurality of apertures comprising a plurality of differing hole shapes (col. 4, lines 49-61).

Allowable Subject Matter

5. Claims 1-22, and 41-45 are allowed.
6. Claims 24-26, 29, 35, and 39 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
7. The following is a statement of reasons for the indication of allowable subject matter: none of the cited art discloses the support element comprises a support tube, or

the second antenna component comprising a parabolic shaped sub-reflector aligned with an axial center of the first antenna component, or the antenna including a waveguide at an axial center of the first antenna component and the first antenna component comprising a hyperbolic shaped main reflector.

Correspondence

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Primary Examiner Hoanganh Le whose telephone number is (703) 308-4921.
9. Any inquiry of a general nature or relating to the status of this application should be directed to the Technology Center receptionist whose telephone number is (703) 308-0956.
10. Papers related to Technology Center 2800 applications **only** may be submitted to Technology Center 2800 by facsimile transmission. Any transmission not to be considered an official response must be clearly marked "DRAFT". The faxing of such papers must conform with the notice published in the Official Gazette, 1096 OG 30 (November 15, 1989). The Technology Center Fax Center number is (703) 872-9306.

Hoanganh Le
Primary Examiner
Art Unit 2821
October 17, 2003


Hoanganh Le
Primary Examiner